

Amendments to the Drawings:

The attached sheets of drawings include changes to FIGs 1, 2 and 3. These sheets, which include FIGs. 1, 2 and 3, replace the original sheets. FIGs. 1, 2 and 3 are amended to include "PRIOR ART" legends.

A marked-up version of the drawings, with revisions shown in red, is included with the amended drawings. Entry of the amended drawings is respectfully requested.

Attachment: Replacement Sheets

Annotated Sheets Showing Changes

REMARKS

Claims 34, 35 and 38 are objected to. Claims 34, 35 and 38 are amended to depend from claim 32. Reconsideration of the objections to claims 34, 35 and 38 is requested.

The drawings are objected to. FIGs. 1, 2 and 3 are amended to include "PRIOR ART" legends. Reconsideration of the objections to the drawings is requested.

The specification is objected to. The specification is amended in a manner consistent with suggestions provided in the Office Action. Reconsideration of the objection to the specification is requested.

Claims 1, 2, 4-11, 13, 15, 16, 18-22, 24, 26, 27, 29-36, 38, 40, 41, 43-47 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson, *et al.* (U.S. Publication Number 2002/0176009). Claims 1, 3, 15, 17, 26, 28, 40 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee, *et al.* (U.S. Patent Number 6,388,500). Claims 12, 14, 23, 25, 37, 39, 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson, *et al.* In view of the amendments to the claims and the following remarks, the rejections are respectfully traversed, and reconsideration of the rejections is requested.

In the present invention as claimed in claims 1-14 and 15-25, an image processing system includes a correlated double sampler (CDS) for receiving an input signal, sampling the input signal and providing an output signal. The CDS includes an amplifier for amplifying the input signal and a variable capacitance unit having first and second variable input capacitances.

Claims 1-14 and 15-25 are amended to clarify certain features of the invention. Specifically, the claims are amended to clarify that the CDS comprises a variable capacitance unit having first and second variable input capacitances. It is believed that these amendments to the claims clarify the distinctions between the claimed invention and the cited references.

In the present invention as claimed in claims 26-39 and 40-50, a method of processing an image includes providing a CDS for receiving an input signal, sampling the input signal and providing an output signal, and amplifying the input signal. The CDS

includes a variable capacitance unit having first and second variable input capacitances for setting gain in the CDS.

Claims 1-14 and 15-25 are amended to clarify certain features of the invention. Specifically, the claims are amended to clarify that the CDS comprises a variable capacitance unit having first and second variable input capacitances for setting gain in the CDS. It is believed that these amendments to the claims clarify the distinctions between the claimed invention and the cited references.

Johnson, *et al.* discloses a CDSVGA circuit 114 having first and second stages. The first stage 131 includes a first capacitor C1 133, which is fixed, a first amplifier 134 connected to first capacitor 133, and a variable capacitor 135 in parallel with the first amplifier.

Johnson, *et al.* fails to teach or suggest an image processing system that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances, as claimed in claims 1-14 and 15-25. Instead, in Johnson, *et al.*, the first stage includes only a single variable capacitor 135.

In addition, Johnson, *et al.* fails to teach or suggest a method of processing an image that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances for setting gain in the CDS, as claimed in claims 26-39 and 40-50. Instead, in Johnson, *et al.*, the first stage includes only a single variable capacitor 135.

Johnson, *et al.* fails to teach or suggest elements of the invention set forth in claims 1-14, 15-25, 26-39, and 40-50. Specifically, Johnson, *et al.* fails to teach or suggest an image processing system that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances, as claimed in claims 1-14 and 15-25, and a method of processing an image that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances for setting gain in the CDS, as claimed in claims 26-39 and 40-50. Therefore, it is believed that the claims are allowable over the cited reference, and reconsideration of the rejections of claims 1, 2, 4-11, 13, 15, 16, 18-22, 24, 26, 27, 29-36, 38, 40, 41, 43-47 and 49 under 35 U.S.C. 102(b) as being anticipated by Johnson, *et al.*, and the rejections of claims 12, 14, 23, 25, 37, 39, 48 and 50 under 35 U.S.C. 103(a) as being unpatentable over Johnson, *et al.*, is respectfully requested.

Lee, *et al.* discloses a correlated double sampler 82 which includes two sample and hold units 90 and 92.

Lee, *et al.* fails to teach or suggest an image processing system that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances, as claimed in claims 1-14 and 15-25. Instead, in Lee, *et al.*, the CDS 82 is formed of first and second amplifiers.

In addition, Lee, *et al.* fails to teach or suggest a method of processing an image that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances for setting gain in the CDS, as claimed in claims 26-39 and 40-50. Instead, in Lee, *et al.*, the CDS 82 is formed of first and second amplifiers.


Lee, *et al.* fails to teach or suggest elements of the invention set forth in claims 1-14, 15-25, 26-39, and 40-50. Specifically, Lee, *et al.* fails to teach or suggest an image processing system that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances, as claimed in claims 1-14 and 15-25, and a method of processing an image that includes a CDS which includes a variable capacitance unit having first and second variable input capacitances for setting gain in the CDS, as claimed in claims 26-39 and 40-50. Therefore, it is believed that the claims are allowable over the cited reference, and reconsideration of the rejections of claims 1, 3, 15, 17, 26, 28, 40 and 42 under 35 U.S.C. 102(b) as being anticipated by Lee, *et al.*, is respectfully requested.

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In view of the amendments to the claims and the foregoing remarks, it is believed that all claims pending in the application are in condition for allowance, and such allowance is respectfully solicited. If a telephone conference will expedite prosecution of the application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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